Deuce® SDQ

Intelligent Video Scaler

WORLD HEADQUARTERS
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P/N 121532 Rev. C

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INCLUDED WITH THIS PRODUCT YOU SHOULD HAVE:

1 - *Deuce*® *SDQ* Intelligent Video Scaler
1 - AC power line cord
1 - 12 foot composite video input cable
1 - 12 foot S-Video input cable
1 - User's Manual
1 - Product Registration card

AVAILABLE OPTIONAL ACCESSORIES:

- 15-pin VGA adapter cables for *Deuce SDQ's* VGA output
- AC line cords for North America, Japan, or Europe
- Rackmounting kits

Deuce is a registered trademark of Communications Specialties, Inc.

INTRODUCTION

Thank you for purchasing *Deuce SDQ*, the Intelligent Video Scaler. With Deuce SDQ, you now have the ability to enjoy high-resolution, film-like images from any standard video source, including broadcast or cable TV, video tape, DVD and laser disc. Deuce SDQ offers a unique, automatic ***Motion Compensation*** feature that will adapt to the specific type of input source image.

When viewing NTSC sources, Deuce SDQ's motion compensation feature automatically selects one of three different motion compensation techniques: adaptive frame (inverse 3:2 pulldown) for original film material, vertical temporal and static mesh. (When viewing PAL sources, inverse 3:2 pulldown is not applicable.) Because each technique is set specifically for the type of input image, the result is the clearest, crispest picture quality possible, making Deuce SDQ ideal for Home Theater and Professional A/V applications. Packed with other great features such as three scaled output resolutions (800x600, 1024x768 and 1280x1024) and standard line doubling and quadrupling outputs, Deuce SDQ is one incredibly versatile scaler. Additional features include Composite, S-Video and Y-C_B-C_R component inputs and RGB or Y-C_B-C_R component outputs, plus an RS-232 remote. An internal power supply and simple, intuitive user-interface round out this sleek, compact unit.

Like all products from Communications Specialties, Deuce SDQ comes with our continuing commitment to provide support. In order to assist us in this process, please be sure to mail in your product registration card. This will make it easier for us to notify you with any new product announcements or other information concerning our product line. Should you need to contact us for support, our office is open Monday through Friday, from 8:30 AM to 5:00 PM Eastern Time. We also offer a comprehensive web site for your added convenience. (www.commspecial.com)

Thank you for choosing Deuce SDQ. As always, we welcome your comments and suggestions.

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INSTALLATION

INSTALLATION STEPS:

1. Connect the provided AC power cord into the connector marked Power on the rear of Deuce SDQ and plug the other end into an AC outlet. This is an auto-sensing universal input power supply and is compatible with worldwide standards.

2. Connect a video source to either the COMPOSITE, S-VIDEO or COMPONENT input on the rear panel.

3. Connect a computer monitor, projector or display to the VGA compatible connector on the rear panel.

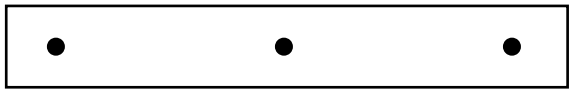
AVAILABLE OUTPUTS:

There are three output configurations available on the output VGA connector: RGBHV, RGBS and Y-C_B-C_R. The rear panel switch next to the output connector selects one of the three output types. The individual signals on the HD-15 connector are defined on page 7. Rear connector pin-outs for the output configuration are selected by this switch.

REMOTE CONTROL:

Deuce SDQ provides for a hard-wired RS-232 remote control connection using a 3-pin Phoenix-type connector on the rear panel. The baud rate is 9600 baud, no parity, 1 start bit, 1 stop bit. The pin out is as follows:

1 - Ground 2 - Receive Data 3 - Transmit Data



Please refer to the accompanying manual, "RS-232 Remote Control Protocol" or our web site at www.commspecial.com for detailed specifications on the command structure for this remote control part.

OPERATION

Deuce SDQ is designed to operate properly with any projector or display while requiring minimal set-up and adjustments.

SELECTING AN INPUT:

There are three buttons on the front panel for directly selecting one of the three inputs. The LED that is lit indicates the active selection. The three input options are:

Video (composite)
S-Video (Y/C)
Y-C_{B}-C_{R} (component)

SELECTING AN OUTPUT FORMAT:

Deuce SDQ provides the five output formats listed below. Pressing the output format button on the front panel will cycle through the choices. The LED that is lit indicates the current output format.

800 x 600
1024 x 768
1280 x 1024
Line double
Line quadruple

MOTION COMPENSATION:

The automatic motion compensation feature will analyze the input source and choose the appropriate compensation. Deuce SDQ will automatically select between inverse 3:2 pulldown (adaptive frame), vertical temporal and static mesh modes. With a PAL input, inverse 3:2 pulldown is not used.

SPECIAL KEY FUNCTIONS:

There are several functions that can be activated by pressing a combination of keys simultaneously:

Key Panel Lockout: Press the VIDEO and S-VIDEO buttons at the same time to lock out the key panel.

Key Panel Unlock: Press the S-VIDEO and COMPONENT buttons at the same time to unlock the key panel and allow normal operation.

System Reset: Press the COMPONENT and the OUTPUT FORMAT buttons at the same time to reset the unit and return all settings to their factory defaults.

OUTPUT TIMING SPECIFICATIONS

The timing specifications for the five output formats follow VESA specifications where applicable.

OUTPUT FORMAT	INPUT TYPE	H(kHz)	V(Hz)
800 x 600	NTSC	37.7	59.94
	PAL	31.4	50
1024 x 768	NTSC	48.4	59.94
	PAL	40.3	50
1280 x 1024	NTSC	63.9	59.94
	PAL	53.3	50
Line Double	NTSC	31.5	59.94
	PAL	31.3	50
Line Quadruple	NTSC	63.0	59.94
	PAL	62.5	50

TROUBLESHOOTING

IF THIS IS YOUR PROBLEM:	THEN CHECK TO SEE:
Nothing works or no video output:	Are any of the LEDs lit? Is the Deuce SDQ plugged into the AC wall outlet?
	Is video source connected to the unit and is it putting out a video signal as viewed on a video monitor?
	Is the VCR or video source in the proper mode to output video as required?
	Have you selected the proper input on the unit (VIDEO, S-VIDEO or COMPONENT) for the source selected as the active input?
	Is the source of the video ON?
There is video on the output display but it appears out of sync:	If you are using 5 BNC or RCA connectors to the output display, try reversing the H and V sync connectors.
	Make sure the display is capable of supporting the resolution you selected on the front of the unit. Try a lower resolution.

ACCESSORIES

The following accessories are available for ***Deuce SDQ***. They may be ordered from your dealer or from Communications Specialties. If you need an accessory that isn't listed below or have a specific application for which you need assistance, please give us a call.

Item #	Description
1240	Single rackmount kit. This kit allows one *Deuce SDQ* to be rackmounted.
1241	Double rackmount kit. This kit allows two *Deuce SDQ* to be rackmounted.
1119-006	6 ft. VGA extension cable
1119-025	25 ft. VGA 15-pin M/F output extension cable
1119-050	50 ft. VGA 15-pin M/F output extension cable
1119-100	100 ft. VGA 15-pin M/F output extension cable
1206	6 ft. HD-15 male to 5x BNC cable

Custom cable lengths are available. Call for information.

REAR CONNECTOR PIN-OUTS

VGA COMPATIBLE OUTPUT:
(HD-15 CONNECTOR)

	RGBHV	RGBS	Y-C_B-C_R
1	Red	Red	C_R
2	Green	Green	Y
3	Blue	Blue	C_B
4	n/c	n/c	n/c
5	Ground	Ground	Ground
6	Ground	Ground	Ground
7	Ground	Ground	Ground
8	Ground	Ground	Ground
9	n/c	n/c	n/c
10	Ground	Ground	Ground
11	n/c	n/c	n/c
12	n/c	n/c	n/c
13	H-Sync out	Composite sync	n/c
14	V-Sync out	n/c	n/c
15	n/c	n/c	n/c

S-VIDEO INPUT:

1	Ground
2	Ground
3	Luminance
4	Chrominance

COMPONENT INPUT:
(3 FEMALE RCA CONNECTORS)

Y center	Y in
Y outer	Ground
C_B center	C_B in
C_B outer	Ground
C_R center	C_R in
C_R outer	Ground

VIDEO INPUT:
(FEMALE RCA CONNECTOR)

center	Composite video in
outer	Ground

RS-232 REMOTE:

1 (left)	Ground
2 (middle)	Receive data
3 (right)	Transmit data

USER & CERTIFICATION INFORMATION

FCC STATEMENT

WARNING: This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart B of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

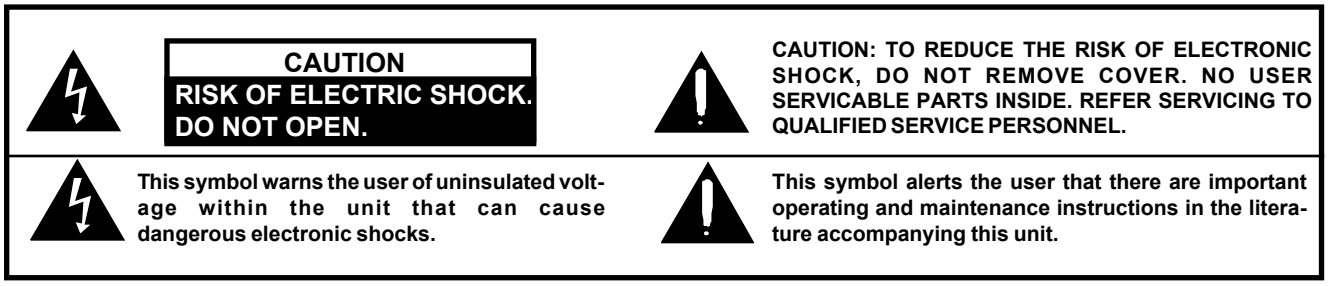
UL INFORMATION

This product meets requirements for category E4 equipment utilizing the sample, limits and methods described in AECO Test Report Number STR-19801-1.

CE INFORMATION

Standards to which conformity is declared: EN 55103-1:1996 EN 55103-2:1997

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRONIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK.
DO NOT OPEN.
CAUTION: TO REDUCE THE RISK OF ELECTRONIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electronic shocks.
This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

WARRANTY

Communications Specialties, Inc. (CSI) warrants that for a period of three (3) years after purchase by the Buyer, *Deuce SDQ* will be free from defects in material and workmanship under normal use and service. A Return Material Authorization (RMA) number must be obtained from CSI before any equipment is returned by the Buyer. All material must be shipped to CSI at the expense and risk of the Buyer.

CSI's obligation under this warranty will be limited, at its option, to either the repair or replacement of defective units, including free materials and labor. In no event shall CSI be responsible for any incidental or consequential damages or loss of profits or goodwill.

CSI shall not be obligated to replace or repair equipment that has been damaged by fire, war, acts of God, or similar causes, or equipment that has been serviced by unauthorized personnel, altered, improperly installed or abused.

RMA numbers and repairs can be obtained by contacting our sales department or by visiting our web site:

http://www.commspecial.com

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Please have your serial number (located underneath Deuce SDQ) available when contacting us.

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Intelligent Video Scaler

RS-232 REMOTE CONTROL PROTOCOL

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INTRODUCTION

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EMAIL: csiasia@commspecial.com

Thank you for purchasing Deuce® SDQ. This manual only includes information regarding the RS-232 Remote Control Protocol for Deuce SDQ. For complete operating instructions, please refer to the User's Manual that came with your unit.

Should you need to contact us for support, our office is open Monday through Friday, from 8:30 AM to 5:00 PM Eastern Time. We also offer a comprehensive web site for your added convenience.

Thank you for choosing Deuce SDQ. As always, we welcome your comments and suggestions.

OPERATION

COMMUNICATION PARAMETERS

- 9600 Baud
- 8 data bits, no parity, 1 stop bit
- Generic TTY
- No flow control

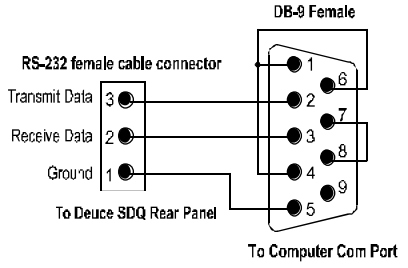

Figure 1. Deuce SDQ RS-232 Remote to Computer Cable Connection

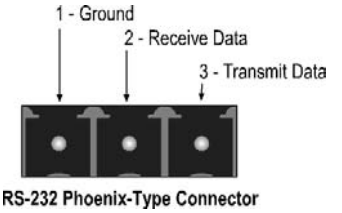

Figure 2. Deuce SDQ RS-232 Remote Rear Panel Receptacle

COMMAND FORMATS:

All commands are case insensitive. Illegal commands, or commands with illegal parameters, have no effect. In such instances, the unit will return an error message.

Please note that a carriage return is a carriage return only and not a carriage return with a line feed.

COMMAND SYNTAX TO UNIT:

The following table lists the syntax for the user remote protocol commands.

COMMAND DESCRIPTION		SYNTAX
Write Command	no parameters	xx:,↵
	with data	xx:,zz↵
Read Command	no parameters	xx:↵

Where:
↵ = carriage return, no line feed
xx = two letter command
zz = data from 1 to 3 digits in decimal

RESPONSE SYNTAX BACK FROM UNIT:

The table below lists the possible responses back from the Deuce MC.

RESPONSE DESCRIPTION	SYNTAX
Welcome message	↵unit title version compile date compile time↵>
Hardware Failure	↵Hardware Failure↵>
Good command, no data back	↵>
Good command, data back	↵xx:=zz↵>
Unrecognized 2-letter command	↵E1↵>
Parameter out of range	↵E2↵>
Syntax error	↵E3↵>
Not valid with current state	↵E4↵>
Communication error during reception of command	↵E5↵>
Timing error -- previous command not yet serviced	↵E6↵>
Hardware error	↵E7↵>

Where:
↵ = carriage return, no line feed
xx = two letter command
zz = data from 1 to 3 digits in decimal

EXAMPLE COMMAND:

To unlock the front panel, send the following: lk:,0↵
The unit will send back: ↵ >

To read whether the front panel is locked, send: lk:↵
The unit will reply with: ↵lk:=0↵>

USER REMOTE COMMANDS: All commands that are available to the Deuce SDQ user are listed in the User Command Remote Table, shown below:

User Remote Command Table

Two Letter Command Name	Parameter	Description	Available Commands	Default Value
sr	N/A[2]	System reset to factory defaults	write only	-
is	0	Input source Composite Video	read and write	0
	1	Input source S-Video		
	2	Input source Y-C_B-C_R		
of	0	Output format Line Double	read and write	3
	1	Output format Line Quadruple		
	2	Output format 800x600		
	3	Output format 1024x768		
	4	Output format 1280x1024		
lk	0	Unlock front panel	read and write	0
	1	Lock front panel		
lt	0	LED test mode off	read and write	0
	1	LED test mode on		
vn	N/A[2]	Returns unit model name with firmname version number, date and time in the following format: Deuce SDQ Version 1.4, Aug 23 2000, 17:27:08	read only	-
ot	0	Output type RGBHV	read only	-
	1	Output type RGBS		
	2	Output type Y-C_B-C_R		
in	0	Input format NTSC	read only	-
	1	Input format PAL		
	2	No input signal		

1. All numbers are in decimal.
2. N/A = not applicable